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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,373	09/23/2003	Maiko Taruki	2003_1310A	9211

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WENDEROTH, LIND & PONACK, L.L.P.  
2033 K STREET N. W.  
SUITE 800  
WASHINGTON, DC 20006-1021

EXAMINER
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FRANCIS, MARK P

ART UNIT	PAPER NUMBER
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2193

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/07/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/667,373	TARUKI ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Mark P. Francis	2193	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>09/23/03</u> | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1-9 have been examined.

***Foreign Priority Date***

2. The foreign priority date considered for this application is September 26, 2002.

***Oath/Declaration***

3. The Office acknowledges receipt of a properly signed oath/declaration filed September 23, 2003.

**Claim Rejections - 35 USC § 101**

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claims 1-7 and 9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

With respect to claims 1-7 and 9,

In this instance, the language of the claim raises a question as to whether the claim is directed merely to an abstract idea that is not tied to an environment or machine which would result in a practical application that would produce a useful, concrete, and tangible result to form the basis of statutory subject matter under 35 USC 101.

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According to the 101 Interim Guidelines, The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a § 101 judicial exception, in that the process claim must set forth a practical application of that § 101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had "no substantial practical application."). "[An application of a law of nature or mathematical formula to a ... process may well be deserving of patent protection." Diehr, 450 U.S. at 187, 209 USPQ at 8 (emphasis added); see also 21 Corning, 56 U.S. (15 How.) at 268, 14 L.Ed. 683 ("It is for the discovery or invention of some practical method or means of producing a beneficial result or effect, that a patent is granted . . ."). In other words, the opposite meaning of "tangible" is "abstract."

Applicant defines a simulation program recorded on a recording medium that comprises a compiler, (software), a library (software) that comprise a plurality of functions and procedures that are defined in a high level language of a target processor that is different from the host processor. The bodies of claims 1 and 9 can be implemented using software means only, i.e. computer programs per se. Thus, the claim as a whole can be implemented using software means only and does not result in a tangible practical application.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1-3 and 5-9 are rejected under 35 U.S.C. 102(e) as being anticipated  
Bond. (U.S. Pub 2001/0008023)

**Independent claims**

With respect to claim 1, bond discloses a compiler type simulator for software development,(Col 2:0020-0022, "...a software environment...emulator program...") said compiler type simulator comprising: a compiler operable to compile a source code described in a high-level language; (Col 3:0023-0027, "...in a language such as C for an API...")  
and a library(Col 3:0023-0025, "...a dynamic link library...") including at least one of a plurality of functions9Col 3:0024-0030, "...a list of functions...") and a plurality of procedures that are defined in the high-level language(Col 3:0023-0027, "...in a language such as C for an API...")

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and model components of a target processor different from a host processor, wherein the source code is described using said library. (Col 3:0050-0057, "...uses information from files...to build C-source language...")

With respect to claim 8, Bond discloses an interpreter type simulator for software development, (Col 2:0020-0022, "...a software environment...emulator program...")

said interpreter type simulator comprising:

a translator operable to read a source code described in a high-level language to output an object-code; (Col 3:0051-0057, "...Translation generator...")

an instruction-fetching unit operable to fetch the object-code to output a fetched object-code; (Col 3:0022-0024, "...compiled object-code...")

an instruction-decoding unit operable to decode the fetched object-code to output a decoded object-code; (Col 2:0021-00224, "...translates the instructions, data, and interfaces of an X86-platform...")

an executing unit operable to execute the decoded object-code; (e.g. See Fig. 2 and related text)

and a library (Col 3:0023-0025, "...a dynamic link library...") including at least one of a plurality of functions (Col 3:0024-0029, "...the list of functions...") and a plurality of procedures that are defined in the high-level language (Col 3:0051-0056, "...to build C-language source code files...") and model components of a target processor different from a host processor, wherein the source code is described using said library. (Col 3:0023-0051, "...a dynamic link library...template files...")

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With respect to claim 9, Bond discloses a simulation program recorded on a recoding medium, (Col 2:0020-0022, "...a software environment...emulator program...") said simulation program comprising:

a compiler operable to compile a source code described in a high-level language; 9Col 3:0022-0024, "...compiled-object code...")

and a library including at least one of a plurality of functions(Col 3:0023-0051, "...a dynamic link library...template files...")

and a plurality of procedures that are defined in the high-level language(Col 3:0051-0057, "...files to build C-language source code files...") and model components of a target processor different from a host processor, (Col 1:0008-0009, "...execute properly on a different platform...") wherein the source code is described using said library. (Col 3:0023-0028, "...compiled into an import library...")

#### Dependent claims

With respect to claim 2, the rejection of claim 1 is incorporated and further, Bond discloses that the components of the target processor comprise: an accumulator of the target processor; a memory controller of the target processor; (Col 2:0016-0018, "...that couples the system memory...")and a register of the target processor. (Col 2:0016-0018, "...System bus 23 may be any of several types,...")

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With respect to claim 3, the rejection of claim 1 is incorporated and further, Bond discloses that the library comprises: a hardware model library defining in the high-level language the at least one of the plurality of functions and the plurality of procedures that model the components of the target processor; (Col 3:0023-0051, "...a dynamic link library...template files...")

and an instruction-set-library defining in the high-level language at least one of a plurality of functions and a plurality of procedures corresponding to instructions of the target processor using the at least one of the plurality of functions and the plurality of procedures of said hardware model library. (Col 3:0023-0051, "...a dynamic link library...template files...")

With respect to claim 5, the rejection of claim 1 is incorporated and further, Bond discloses that the at least one of the plurality of functions and the plurality of procedures of said library comprises a function and a procedure operable to calculate at least one of an executing-cycles-number of the target processor and power consumption of the target processor. (Col 4:0091-0105, "...An exception-function template...")

With respect to claim 6, the rejection of claim 1 is incorporated and further, Bond discloses that at least one of an executing-cycles-number of the target processor and power consumption of the target processor can be changed. (Col 4:0091-0105, "...An exception-function template...")



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With respect to claim 7, the rejection of claim 1 is incorporated and further, Bond discloses that the at least one of the plurality of functions and the plurality of procedures of said library comprises a function and a procedure operable to calculate code size in the target processor.(Col 5:0137-0139, "...a different value for a parameter..")

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bond in view of Simons.(U.S. Pub 2006/0101432)

With respect to claim 4,

the rejection of claim 3 is incorporated and further,

Bond does not show that the instructions of the target processor comprise an ADD instruction, an SUB instruction, an AND instruction, an OR instruction, an LD instruction, an ST instruction, an SET instruction and an MOV instruction.

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Simons shows that the instructions of the target processor comprise an ADD instruction, an SUB instruction, an AND instruction, an OR instruction, an LD instruction, an ST instruction, an SET instruction and an MOV instruction(Col 2:0018-0019, "...the new instruction movx.1...") in an analogous system for the purpose of providing a simple and effective method of assembling instructions of a new assembly language instruction set architecture using an old assembler.(Simons:Col 1:0009)

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to include a set of target processor instructions.

The modification would have been obvious because one of ordinary skill in the art would have been motivated to provide a simple and effective method of assembling instructions of a new assembly language instruction set architecture using an old assembler.(Simons:Col 1:0009)

### ***Conclusion***

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark P. Francis whose telephone number is (571)272-7956. The examiner can normally be reached on Mon-Fri 8:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai T. An can be reached on (571)272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Mark P. Francis

Patent Examiner

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MENG-AI T. AN  
SUPERVISORY PATENT EXAMINER  
EBC CENTER 2100